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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LAY, MICHELLE K	

ART UNIT	PAPER NUMBER
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/647,932

Applicant(s)

PAIR ET AL.

Examiner

Michelle K. Lay

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. -

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/19/2007 has been entered.

Response to Amendment

The amendment filed 12/19/2007 has been entered and made of record. Claims 1-37 have been cancelled. Claims 38-50 are pending.

Response to Arguments

Applicant's arguments with respect to claims 1-29, 32, and 37 have been considered but are moot in view of the cancellation of claims, and the new ground(s) of rejection.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **38-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritchey (5,130,794) in view of Mix et al. (6,919,884 B2) and Umeki et al. (6,078,329).

Ritchey teaches the limitations of claims 38-50 with the exception of explicitly teaching a door or window in front of a display, and updating the display based on the user's plurality of displacement steps. However Mix teaches a virtual fireplace with a display behind the doors and Umeki teaches a method/system that display an object moving in three-dimensional virtual space.

In regards to claim **38**, Richey discloses a panoramic image based virtual reality display system. Referring to Fig. 34, the viewer's entire body is positioned in the large display assembly (23), in which display units surround the viewer such that the viewer sees a respective portion of the scene of spherical coverage in any viewable direction (said **structure ... large enough to accommodate an individual**). The large display assembly (23) is comprised of a structural framework (9) and supports (10), which hold the display units (11) and optical enlarging means (12) securely in place (said **adjoining walls**) [c.9 L.14-23]. The floor (130) and its associated display unit (11) beneath, to the sides, and over the viewer/operator are integrated so the viewer is presented with a substantially continuous scene for viewing [c.28 L.15-19]. Display systems and optical enlargement means mounted on spring-hinged doors, latches, or rollers, allow the entry and exit assembly (131) to move back and forth in an open and closed position to

enable viewer entry and exit [c.28 L.28-32]. These means may also be used for easy assembly and disassembly. Richey discloses that it is further foreseen that the optical and camera arrangements disclosed in Figs. 6-17 may transmit their recorded image to various types of sensors such as visual, motion detection, and pyroelectric sensors (said **sensor system**) [c.34 L.57-61].

Mix teaches a fireplace generally including a display driven by a controller. As shown in Fig. 1, the fireplace (100) includes a display (110) that can be driven by controller (400) or a computer [c.2 L. 60 – c.3 L.6]. The display (110) can be configured to display images in three dimensions that do not require the use of headgear [c.3 L. 13-23]. With reference to Figs. 1-3, a decorative façade may surround the display (100), which can consist of trim (152) and doors (160, 161) (said **display ... behind ... door**). The trim (152) and hearth (155) are configured to abut a wall (180) to simulate a fireplace disposed within the wall (180) (said **a real ... door ... in wall**) [c.5 L.50-63]. Additionally, the images displayed on the display can be from a DVD player or a television tuner, as well as from a computer [c.3 L.64 - c.4 L.15]. Furthermore, the display can display images of an aquarium, nature scene, artwork, or function as a virtual window when used in conjunction with a video capture device such as a video camera mounted outside a structure [c.7 L.27-33].

Umeki teaches a virtual object display apparatus that display an object moved in three-dimensional virtual space. With reference to Figs. 13 and 14, a virtual space is displayed on the screen. A position calculation section (43) calculates the walking direction, the basis point, the target point, the view point and the reference point. A

swing calculation section (44) calculates the display position and the display direction [c.7 L. 10-25]. A user inputs a movement direction. The position memory section (102) stores the position data of objects located in the three-dimensional virtual space. The display position set section (107) sets the display position (camera position) according to the viewpoint calculated by the position calculation section (103). The display control section (108) creates the virtual image according to the display position and the reference point, and output the virtual image to the display (109) (said **display ... changes in response to ... displacement**) [c.7 L.30-67]. Furthermore, the method/system of Umeki can implement a head-rotation angle calculation section (54) that calculates the rotation angle of the head of the human model and updates the display accordingly [c.9 L. 54-55].

Therefore, it would have been obvious to one of ordinary skill in the art to modify Richey with the fireplace display of Mix because the operable real object provides a sense of realism to the user while in the virtual reality room of Richey. Furthermore, the method/system of Mix can function as a virtual window when used in conjunction with a video capture device such as a video camera mounted outside a structure [Mix: c.7 L.27-33] providing additional realism to the user. Also, by modifying the display of Mix with the virtual reality display of Umeki, the realism of the virtual reality world increases by giving the viewer the ability to view the viewpoint while he directs his viewpoint toward surrounding objects in the virtual space [Umeki: c.1 L.55-60]. The sensors of Richey would control the human model of Umeki in order to update the display based on the user's plurality of steps.

In regards to claim **39**, claim 39 recites the same limitations as claim 38 with the exception of claiming a window instead of a door. However, it would have been obvious to one of ordinary skill in the art to have any type of structure to function as a virtual window when used in conjunction with a video capture device such as a video camera mounted outside a structure [Mix: c.7 L.27-33]. Therefore, the same rationale used for claim 39 is applied.

In regards to claim **40**, Mix teaches a virtual window when used in conjunction with a video capture device such as a video camera mounted outside a structure [Mix: c.7 L.27-33].

In regards to claims **41-43**, Richey teaches the display assemblies may be used as a simulator for various kinds of vehicles [c.34 L.35-55]. Furthermore, Mix teaches the display can display images of an aquarium, nature scene, artwork, or function as a virtual window when used in conjunction with a video capture device such as a video camera mounted outside a structure [c.7 L.27-33], therefore providing the flexibility to portray to the user any type of vehicle.

In regards to claim **44**, claim 44 recites the same limitations as claims 38 and 39. Therefore, the same rationale used for claims 38 and 39 is applied.

In regards to claim **45**, claim 45 recites the same limitations as claim 40. Therefore, the same rationale used for claim 40 is applied.

In regards to claims **46** and **47**, with reference to Figs. 1-3, Mix teaches a decorative façade may surround the display (100), which can consist of trim (152), and doors (160, 161). The trim (152) and hearth (155) are configured to abut a wall (180) to simulate a fireplace disposed within the wall (180) [c.5 L.50-63]. Furthermore, with reference to Fig. 7, doors (160, 161) can be opened. Although Mix is not explicit as to shutters and a window, Mix teaches simulating a real structure, as for example, an aquarium, nature scene, artwork, or function as a virtual window when used in conjunction with a video capture device such as a video camera mounted outside a structure [c.7 L.27-33].

Therefore, it would have been obvious to one of ordinary skill in the art that the façade of Mix is to match the display so to portray to the user a sense of realism. Therefore, if the display is to be a window, it would have been obvious that the façade would include shutters and an operable window.

In regards to claims **48-50**, claims 48-50 recites the same limitations as claims 41-43 respectively. Therefore, the same rationale used for claims 41-43 is applied.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle K. Lay whose telephone number is (571) 272-7661. The examiner can normally be reached on Monday-Friday 7:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee M. Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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01.09.2008 /mkl/


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